PREVENTION NEEDS ASSESSMENT STUDY
ARIZONA

SOCIAL INDICATOR STUDY

FINAL REPORT

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Prepared for:
Division of Behavioral Health Services
Arizona Department of Health Services

Funded by:
Substance Abuse and Mental Health Services Administration
Center for Substance Abuse Prevention

December, 2001

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ACKNOWLEDGMENTS

We want to acknowledge all the individuals and agencies who have contributed to this final report. We first want to particularly thank the students who worked with us on this project: Ori Parnaby, Libby Ford, M.P.H., Matt McGorray, M.S., and Michael Kallen PhC, M.P.H. Ori and Libby assisted in data collection and management, while Matt organized the data into maps that beautifully displayed data at a county level across the state. Michael Kallen performed the factor analyses and led us through the development of risk indices.

We next thank Gary Christopherson, Ph.D., Director of the Center for Applied Spatial Analysis (CASA) at the University of Arizona. He provided GIS assistance, supervision of students, and humor to our staff meetings that was invaluable.

During this past year, Terry Smith, Database Consultant, joined the group to organize the data for the 40 variables over two years of data collection into an integrated database that manages and displays all the data in this report. We thank him for providing some of the finishing touches to an arduous process.

Finally, we acknowledge and thank all of the agencies that provided us with information. They took valuable staff time to assist us with this project. These participating agencies and staff are listed in the Data Definitions section of this report as the data sources. This was a statewide effort that would have been impossible without the cooperation of all these state agencies.

PREFACE

The goal of the Social Indicator Study for the State of Arizona was to develop a process for gathering and monitoring archival data from across state agencies that could be used as accessible measures of environmental (social) variables associated with adolescent substance abuse. Collectively these variables might assist the identification of levels of risk for substance abuse among adolescents within specific geographical areas of the state.

This is the final report for the Arizona Social Indicator Study and, as such, this report combines the following contract products: Risk Monitoring Report Two, Project Final Performance Report and the Final Summary Report. This work was completed as part of a subcontract with the Arizona Department of Health Services (ADHS), which is the agency that contracted with Substance Abuse and Mental Health Services Administration (SAMHSA) for the prevention needs assessment.

In this report, we provided data for a specific set of social indicators that were selected by the SAMSHA. When possible, data were collected for the years 1997 and 1999 and the prevalence of each of the social indicators was calculated for the 15 Arizona counties by year. This report presented county-level data in tabular form as well as state maps to contrast the relative frequency of each indicator by county. Overall risk profiles for each county were then developed to assist the county in reviewing their results. Community profiles were developed for nine communities as a pilot project. Also, preliminary work towards the development of summary risk indices was performed and included with this report. Factor analyses were used to reduce the number of variables into clusters of risk factors that were based on the actual data obtained in Arizona.

This Report includes data from both years of data collection. Since the last report, we have added variables, deleted variables that were inappropriate or no longer available, and refined data definitions. Also corrections to some of the data tables were made. Therefore, ***we request that you destroy any previous versions of this report that you may have, such as the Risk Monitoring Report One that was distributed in August, 2000. Please use this current document as the final and most accurate report.***

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INTRODUCTION

This is the Final Report of the Social Indicator Study of the Arizona State Prevention Needs Assessment. The needs assessment was funded by the Center for Substance Abuse Prevention (CSAP) at the Substance Abuse and Mental Health Services Administration (SAMHSA) in the U.S. Department of Health and Human Services. The contract with SAMHSA mandated collection of a specific set of social indicators to provide standardized data collection across the counties of the United States. This list of *Validated Archival Indicators of Risk and Outcome Variables that Predict Problem Behavior* was used to collect and define the variables included in this Final Report. Most of the data reported in this report are from the years 1997 and 1999.

Background

The assessment and tracking of social indicators in a statewide prevention needs assessment project is important since these "environmental" variables can potentially be utilized to predict risk for substance abuse in specific geographical areas of the state. When used in conjunction with other methods of assessing need, the effectiveness of the overall community needs assessment is enhanced (Fiorentine, 1994). These indicators can serve as relatively accessible measures of protective and risk factors that are available to be examined over time and to provide evidence for the need to focus on specific prevention message content and/or geographical areas for intervention.

The level of need for prevention services cannot be determined through simple counts of the number of current substance users within a given population. Rather methods for assessing the probability (or risk) of future substance use among those not currently using are needed, along with an assessment of the resources currently available within the population or community (Arthur & Blitz, 2000). These assessments can help a community reduce the probability of future drug abuse by providing them with tools needed to prioritize specific intervention targets and populations. A general model suggests that effective preventive programming requires: (1) information on the incidence and prevalence of substance abuse within a population, (2) information on the risk and protective factors for substance abuse to and finally (3) community-specific, multi-component strategies that focus on the risk and protective factors identified and prioritized in the population (Hawkins, et al, 1995).

The theoretical underpinnings of this Social Development Model (Hawkins, Catalano, & Miller, 1992) provide guidance in program planning based on a risk reduction approach and support the utility of epidemiological data, such as archival social indicators, to inform prevention policy. In essence, this model recognizes that several different, and frequently co-occurring, sociological variables are associated with substance abuse. It acknowledges that protective processes may reduce the negative effects of the presence of risk factors. This model also recognizes there are potential ecological or community factors that can interact with substance abuse or other problem behaviors. Thus, it becomes essential to identify geographical areas or subpopulations where protective factors are low or risk exposure is high. Especially when resources are limited, it is mandatory to prioritize risk factors and intervene in regions or with populations where higher risk factors exist.

Epidemiological data provide an empirical foundation for substance abuse prevention policy and programming by establishing the prevalence and intensity of risk and protective factors over time within communities, counties, regions, and states. With the assistance of a data-based monitoring system, policy and resource allocation can be targeted to preventive interventions that more effectively match needs.

Although there are archival, population-based data that have appeared relevant to the ecological assessment of substance abuse risk, only recently have they been systematically assembled and assessed for their validity and sensitivity as indicators of the risk for substance abuse in specific geographical areas. Given the relatively low cost associated with the collection of social indicators, in contrast to the collection of survey data, it should be a primary method in establishing an efficient risk monitoring system. However, there are problems associated with their use (Cagle & Banks, 1986; Gruenewald, 1997). To achieve a valid risk monitoring system, systematic assessment of the indicators' validity and sensitivity to change over time and their utility for replacing or supplementing survey measures of risk and protective factors as a basis for prevention policy and planning is needed.

Social indicators do not always capture precisely the concepts they are intended to measure. They can, however, serve as useful surrogates when a more precise measure is unavailable. For example, the rate of juvenile arrests for violent crimes is an indicator of violent acts among juveniles, but it is not an ideal measure because it does not capture those violent acts that do not result in an arrest. Thus, the 'events' that make up the indicator rates may overestimate or underestimate the true prevalence of the outcome of interest. However,

as long as the indicators represent a constant proportion of the true prevalence of the problem behavior, trends in the outcome indicators are meaningful.

The benefits of collecting ecological or social indicators include increased data comparability and availability across geographic areas of the state and for multiple years, and low cost and ease of data collection. When data are standardized, organized according to risk factors, and presented in comparable units (such as percentages or rates per thousand individuals in the population), relative risk across regions, counties, and communities can be assessed and compared for planning purposes. Comparisons of indicators of specific risk factors allow a means for planners to identify and prioritize risk factors to be targeted with focused prevention efforts in identified geographical areas or population groups.

The Six-State Consortium (a SAMHSA-funded prevention needs assessment project) completed a three year project to study the validity and utility of a set of social indicators as measures of specific, empirically established risk factors. While further analyses need to be done on the social indicator approach to monitoring individual risk factors, the results were encouraging. Thirteen risk factors and 40 indicators were identified that showed a strong correlation with rates of substance abuse in adolescents and risk factors measured through surveys. In addition, many of the indicators had strong face validity and would provide useful information to program planners to determine what specific types of prevention services were needed (such as family-focused, school-focused, or community-focused).

Risk Factors and Social Indicators

Thirteen risk factors and 40 social indicators were included in the *Validated Archival Indicators of Risk and Outcome Variables that Predict Problem Behavior*. These risk factors and their associated social indicators are listed in Table 1.

In this report and the work of the Six-State Consortium, risk factors are characteristics of individuals or family, school or community environments that are related to an increased likelihood of youth problem behaviors, like substance abuse. In contrast, protective factors are characteristics related to a decreased likelihood of such behaviors. These factors can be interrelated, and efforts to reduce risk and increase protection often require multidimensional approaches. The social indicator then is an actual measure of the risk or protective factor using an archival data source.

Measures Included in the Final Report

This Final Report provides measures of the frequency of 40 social indicators at the state and county level for two different years. A subset of 1999 indicators are then reported for nine communities or jurisdictions across the State. Several of the individual indicators included in this report are replacements for those in the original list distributed by SAMHSA. Table 1 indicates which of the indicator variables are in the original SAMHSA list and which are reported here by county and community/jurisdiction.

While standard definitions for each of the social indicators were provided by SAMHSA and were used when possible, it became necessary to refine a number of the definitions due to data availability. The final definitions (labeled "ADHS Definition") are provided at the bottom of each table reporting the statewide frequency of the social indicator and in the Data Definitions section of this report. In this report, simple tabular presentations of rates and corresponding confidence intervals were prepared for each social indicator for each county and for the state. Maps of the relative frequency of the social indicator across the counties were developed. Social indicator data were also provided in profiles of all indicators for each county.

Table 1. Validated Archival Indicators of Risk and Outcome Variables that Predict Problem Behavior

Risk Factor	Social Indicator	SAMHSA	ADHS	Community
Availability of Drugs				
	Alcohol Sales Outlets	X	X	X
	Tobacco Sales Outlets	X	X	X
Transitions and Mobility				
	New Home Construction	X	X	O
	Households in Rental Properties	X	X	O
	Net Migration	X	X	O
Low Neighborhood Attachment and Community Disorganization				
	Population Voting in Elections	X	X	O
	Prisoners in State & Local Correctional Systems	X	X	O

Risk Factor	Social Indicator	SAMHSA	ADHS	Community
Extreme Economic and Social Deprivation				
	Unemployment	X	X	X
	Free and Reduced Lunch Program	X	X	X
	Temporary Assistance for Needy Families	X	X	X
	Food Stamp Recipients	X	X	X
	Adults Without High School Diploma	X	X	O
	Single Parent Family Households	X	X	O
Family History of Substance Abuse				
	Adults in Alcohol and Other Drug (AOD) Treatment Programs	X	O	O
Substance Use				
	Juvenile Alcohol-Related Arrests	X	X	X
	Juvenile Drug-Related Arrests	X	X	X
	Adult Alcohol-Related Arrests	X	X	X
	Adult Drug-Related Arrests	X	X	X
	Adult Drunken Driving Arrests	X	X	X
	Alcohol Related Traffic Fatalities	X	X	X
	Drug Use in Pregnancy	X	O	O
	Alcohol Use in Pregnancy	O	X	X
	Tobacco Use in Pregnancy	O	X	X
Violence				
	Juvenile Arrests for Violent Crimes	X	X	X
	Adult Arrests for Violent Crimes	X	X	X
	Homicides	X	X	O
Non-Violent Crimes				
	Juvenile Arrests for Curfew, Vandalism, and Disorderly Conduct	X	X	X

Risk Factor	Social Indicator	SAMHSA	ADHS	Community
	Juvenile Arrests for Property Crimes	X	X	X
	Adult Arrests for Property Crimes	X	X	X
Suicide				
	Adolescent Suicide	X	X	O
Adolescent Sexual Behavior				
	Adolescent Pregnancies	X	X	O
	Birthrate Among Juveniles	X	X	X
Family Management Problems				
	Children Living Away from Parents	X	X	O
	Children Living in Foster Care	X	X	O
Family Conflict				
	Divorce	X	X	O
	Domestic Violence Arrests	X	X	X
Low Commitment to School				
	Event Dropouts	X	X	O
	Status Dropouts	X	X	O
Early Initiation of the Problem Behavior				
	Dropouts Prior to Ninth Grade	X	X	O
	Vandalism Arrests, Age 10-14	X	X	X
	Alcohol-Related Arrests, Age 10-14	X	X	X
	Personal and Property Crime Arrests, Age 10-14	X	X	X

METHODOLOGY

1. **Data Sources:** Utilizing the list of *Validated Archival Indicators of Risk and Outcome Variables that Predict Problem Behavior* and the definitions provided by the Center for Substance Abuse Prevention (CSAP) at SAMHSA, appropriate data were collected from existing records of state, county, and other governmental agencies. The specific data source for each social indicator was indicated on the page reporting the frequency of the social indicator within the state, as well as in the Data Definitions section of this report.

2. **Data Collection Methods:** Data were obtained electronically, whenever possible. Some data did, however, have to be transferred from a hard copy to an electronic database. A format for entering the social indicator data into a database was completed; all specific geographic coding received with the data set was maintained.

3. **Calculation of Population Frequency (Rates):** Most of the social indicator variables required that a frequency or rate be calculated, e.g. juvenile arrest rate for alcohol violations per 100,000 juveniles. This calculation required that an appropriate denominator be associated with the appropriate numerator. The numerator was the number of events identified from the data set for the appropriate age range, gender, and geographic unit. The denominator was the estimated number of persons of the same age range, gender, and geographic unit who were potentially at risk, i.e. lived in that area during the same time period.

   For all data that used 1997 and 1999 event information, the appropriate denominator data were 1997 and 1999 population estimates. The county data were obtained from the United States Census and were the same estimates used by the Department of Economic Security and Arizona Department of Health Services (ADHS). These denominator data may be found in table format at the end of the Data Definitions Section. For those variables using 1990 US Census files as the source of numerators (e.g. adults without a high school diploma), the denominator was obtained from the 1990 census. For the 1999 community data, specific population estimates were obtained from ADHS.

For most of the county-level and state-level indicators, 95% confidence intervals were calculated around the rate. All calculations were made using Stata software, version 6 and assumed the Poisson distribution. It should be noted that for those indicators that could incorporate negative change, e.g. net migration, the underlying formulas did not allow the interval to overlap zero.

All rates and confidence intervals were recalculated for this report and some differences were noted from the prior report. Results from the current report should be considered the final results.

4. **Geographic Areas Sampled:** In order to provide consistent geographical reporting of the social indicator data across the state, the population frequency (rates) for each indicator were estimated for each county and the overall state. Not all data sets included sufficient information for estimation of the frequency of the indicator for geographic areas smaller than a county, e.g. community. Also, the numbers of events were extremely low for some indicators (e.g. adolescent suicide), making rate estimation inappropriate. Furthermore, some jurisdictions, e.g. South Tucson, were not recognized geographical units within each data source. These analyses would require further assumptions and interpolation to construct the smaller jurisdiction rates.

5. **Standard definitions:** The standard definitions specified in the contract by SAMSHA were used whenever possible. However, based on data availability, it became necessary to refine a number of definitions. All definitions are listed in the Data Definitions section at the end of this report. Final definitions are reported at the bottom of the each table reporting the statewide frequency of the social indicator and are labeled "ADHS Definition" in the Data Definitions section of this report.

6. **Graphic Presentations:** For each social indicator, state maps were created to graphically represent the frequency of the social indicator throughout the state. ARCVIEW software was used to develop these maps. The maps provided a visual description of the ranking of the counties throughout the state for each social indicator. The z-score (or standard deviation from the mean of all 15 counties) was used to develop these maps. Arcview

categorizes the individual county scores by their relative distance from the county mean. In the maps, shades of red represent counties above the mean of the 15 counties and shades of blue represent counties below the mean.

7. **Z-scores:** For this report, this score is the standard deviation for each county of the social indicator rate from the mean of all of the county experiences (all-counties mean). It was calculated as:

   (county rate – all-counties mean) / standard deviation of the all-counties mean

   Conversion of the individual county rates for each variable to z-scores produces a score distribution with a mean of 0.00 and a standard deviation of 1.00. This score allows meaningful comparisons between multiple variables that may, in their unconverted forms, display widely varying means and standard deviations, making comparison across counties and across variables difficult.

   For this z-score calculation, the all-counties mean represents the mean value of the 15 Arizona county data points (i.e., the all-counties mean); it has a value in z-score metric, as stated above, of 0.00. An indicator z-score of +/- 1.00 represents then a value that is a single standard deviation from the county mean, with a z-score of positive 1.00 representing a value one standard deviation above the all-counties mean, and a z-score of negative 1.00 representing a value one standard deviation below the all-counties mean.

8. **County Profiles:** Risk profiles were developed for each county to summarize the experience of that county for the set of social indicators. The first page of the profiles lists the specific county rates for each indicator and the overall Arizona rate for the same time period. The second page of profiles consists of graphs that display the degree to which the county rates vary from the experience of all of the state counties (the standard variance above or below the mean of the state 15 counties for each indicator). These graphs used the z-score defined above.

9. **Cautions:** Several issues arose throughout the study for some of the variables. These are described within the Data Definitions Section; however, further note should be made of these problems.

- **Domestic Violence:** This variable is only voluntarily submitted to the Governor's Council. We went ahead and calculated county rates; however, these are serious underestimates of the rates because not all cities submitted data and not all cities appeared to submit complete reports. We suggest caution in interpreting county data for this variable. We did not create a map for this variable.

- **Children Living in Foster Care:** The definition used by the state agency changed between the two time periods. The relationships between the counties may have stayed the same; however, the absolute rates between the two time periods will not be comparable.

- **Tobacco Sales Outlets:** This variable was only collected for 1998. This data does not appear to be routinely collected at smaller geographical areas. This variable will not, therefore, be of utility over a longer time period needed for monitoring. However, the 1998 information is presented in this report.

- **1990** Census Variables: The list of *Validated Archival Indicators of Risk and Outcom Variables that Predict Problem Behavior* mandated that five 1990 census variables be included in the risk profiles. It is unlikely, however, that 1990 information will be of substantial utility for a rapidly changing population. The next archival data collection period should include 2000 Census information.

Limitations of the Data

Most of the indicator variables in this study are aggregate measures, meaning they are summaries of observations derived from individuals in the group. In this type of analysis, the social indicator variables are ecological variables with the unit of analysis the group (e.g. the county). Within each geographic unit, we do not actually know the joint distribution of any combination of variables at the individual level. For instance, we do not know the joint

distribution of whether an individual is from a divorced home and a substance user, or whether a person from a high poverty area is actually below the poverty level. As noted by numerous statisticians and epidemiologists, it can be misleading to use ecological variables as proxies for individual data in models to predict individual behavior. This makes ecological analyses particularly prone to a type of bias known as the ecological fallacy (Morgenstern, 1998). The potential for ecological fallacy will be particularly relevant when comparing the risk profile information with the student survey results

The aggregate variables, however, often measure a different construct than a similar variable at the individual level. The variable may be the social environment or context in which the individual lives, and this environment may be distinct from the personal attribute of the individual (Susser, 1994). The creation of a risk profile from social indicator data for substance abuse within communities should not imply that community characteristics are equivalent to individual-level characteristics. These ecological variables can be useful tools to define high-risk groups for community intervention and education programs (Feinleib, 1998).

Another problem inherent in ecological analyses is temporal ambiguity. It is often unclear whether the various social indicator variables came as a result of the outcome (high or low substance abuse rates) or that they led to the outcome. A specific problem for the current study is the use of social indicator estimates derived from the 1990 US Census data to represent population experiences during 1997 and 1999. It is unclear whether, in a state undergoing rapid population changes, that the information from 1990 will still be relevant for all geographic areas in 1997. These data were required for this Report and are included within the tables. However, the information may not be as relevant as originally intended. As 2000 US Census data become available, these indicators can supplant the 1990 data.

Finally, it must be remembered that these social indicator data are based on archival data collected within the state by multiple agencies for multiple purposes, none of which included prevention assessment. While the use of archival data can be time and cost effective, there are limitations to its utility. There are distinct variations in the geographic boundaries used by the different collecting agencies. For instance, some information is collected only at the zipcode level and others only at the city jurisdiction level. Since there is not perfect congruity between zipcodes and city jurisdictions, if zipcode information is to be aggregated to the city level, a set of assumptions and interpolations will need to be made. The

appropriateness of these assumptions need to be kept in mind while reviewing the risk profiles. Another issue is that data systems used within the agencies for collecting and archiving data are constantly changing. Variables that are available one year for the Social Indicator Study may be modified, or even eliminated, by a reporting agency another year. Definitions used to structure the variable can also change, making it necessary to annually review the data sources being received by an archival monitoring system.

SUMMARY AND RECOMMENDATIONS

At the end of a project, there is always more known about the problems and issues than are known at the beginning. The original goal of the Social Indicator Study was to develop an ongoing system of gathering and monitoring a specific set of archival data. The specific aims had been to collect annual data for three years, to determine if there were changes in the frequency of the various indicators over the time period, and to then compare the risk factors with corresponding domains from results from the Student Survey. Of necessity, these aims were modified to reflect the change in budget, a decrease in the number of years of data collection, and the inability to compare archival data with the final student surveys. The Social Indicator Study did, however, collect data for 40 indicators for two years and integrated results for all these data into a documented database. The prevalence of the various social indicators was calculated by standardized geographic and demographic subgroups for individual years and by individual counties. Risk profiles for the 40 specific indicators and for a potentially relevant subset were developed for counties and selected communities.

From this collective work, we make several suggestions for future archival data monitoring projects within the state:

- Carefully evaluate each variable for the coverage being collected by the agency. Do not include a variable in the main database if it is not collected by most of the jurisdictions within the state, regardless of the national mandate to collect the information. Domestic violence arrests is a variable, for instance, that is only voluntarily collected, making for poor coverage and probably of poor utility for an ongoing archival project.

- Consider presenting the merged data across several years of data collection. This should increase the reliability of the indicators and strengthen assumptions made regarding the data.

- Make the archival database flexible. Geographical areas of interest change; new variables may need to be added as new data sources become available.

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Community Risk Profile: Selected Social Indicator Rates

Flagstaff, AZ: 1999

	Flagstaff	Coconino	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	425.10	288.79	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	149.00	147.52	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	5.30	6.71	4.41
-Free and reduced lunch program (per 100)	40.34	49.64	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	2989.05	2730.10	1215.88
-Juvenile drug-related arrests (per 100,000)	1924.88	1067.71	918.97
-Adult alcohol-related arrests (per 100,000)	4682.87	3213.23	1523.65
-Adult drug-related arrests (per 100,000)	981.35	728.62	697.93
-Adult drunken driving arrests (per 1,000)	20.73	13.61	9.45
-Alcohol related traffic fatalities (per 100)	0.00	0.00	21.13
-Alcohol use during pregnancy (per 1,000)	0.00	7.76	10.68
-Tobacco use during pregnancy (per 1,000)	26.08	27.72	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	485.13	371.67	306.98
-Adult arrests for violent crimes (per 100,000)	375.35	280.52	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	2535.21	1479.93	2220.55
-Juvenile arrests for property crimes (per 100,000)	6150.23	3534.26	3084.07
-Adult arrests for property crimes (per 100,000)	3547.77	2235.66	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	4.85	9.78	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	14.00	11.65	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	3.27	1.85	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	8.04	7.40	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	48.24	27.43	22.53

Community Risk Profile: Selected Social Indicator Rates

Payson, AZ: 1999

	Payson	Gila	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	577.23	271.41	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	251.19	181.76	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	3.50	7.13	4.41
-Free and reduced lunch program (per 100)	30.91	50.74	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	6673.62	2961.94	1215.88
-Juvenile drug-related arrests (per 100,000)	0.00	912.69	918.97
-Adult alcohol-related arrests (per 100,000)	1800.97	1031.91	1523.65
-Adult drug-related arrests (per 100,000)	0.00	267.64	697.93
-Adult drunken driving arrests (per 1,000)	10.04	5.83	9.45
-Alcohol related traffic fatalities (per 100)	0.00	4.76	21.13
-Alcohol use during pregnancy (per 1,000)	27.62	34.23	10.68
-Tobacco use during pregnancy (per 1,000)	237.57	184.52	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	312.83	241.09	306.98
-Adult arrests for violent crimes (per 100,000)	150.08	107.06	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	6256.52	2049.25	2220.55
-Juvenile arrests for property crimes (per 100,000)	8863.40	4374.03	3084.07
-Adult arrests for property crimes (per 100,000)	1327.64	1011.09	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	11.47	17.14	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	0.00	3.36	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	6.75	4.98	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	13.49	8.30	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	70.83	36.53	22.53

Community Risk Profile: Social Indicator Rates

Parker, AZ: 1999

	Parker	La Paz	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	1307.56	428.84	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	569.86	303.77	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	6.90	8.04	4.41
-Free and reduced lunch program (per 100)	57.88	43.87	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	1892.74	1869.63	1215.88
-Juvenile drug-related arrests (per 100,000)	1419.56	606.37	918.97
-Adult alcohol-related arrests (per 100,000)	994.88	1678.64	1523.65
-Adult drug-related arrests (per 100,000)	938.03	899.75	697.93
-Adult drunken driving arrests (per 1,000)	5.97	13.76	9.45
-Alcohol related traffic fatalities (per 100)	0.00	0.00	21.13
-Alcohol use during pregnancy (per 1,000)	10.53	14.81	10.68
-Tobacco use during pregnancy (per 1,000)	84.21	81.48	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	946.37	353.71	306.98
-Adult arrests for violent crimes (per 100,000)	142.13	201.44	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	2365.93	1667.51	2220.55
-Juvenile arrests for property crimes (per 100,000)	630.91	1061.14	3084.07
-Adult arrests for property crimes (per 100,000)	170.55	879.61	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	14.20	13.79	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	0.39	3.83	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	0.00	1.62	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	0.00	2.44	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	4.85	4.06	22.53

Community Risk Profile: Selected Social Indicator Rates

Mesa, AZ: 1999

	Mesa	Maricopa	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	165.14	127.14	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	60.93	75.50	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	2.50	2.95	4.41
-Free and reduced lunch program (per 100)	36.72	52.98	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	893.53	982.50	1215.88
-Juvenile drug-related arrests (per 100,000)	821.01	712.26	918.97
-Adult alcohol-related arrests (per 100,000)	1475.89	1546.65	1523.65
-Adult drug-related arrests (per 100,000)	362.16	640.83	697.93
-Adult drunken driving arrests (per 1,000)	11.05	10.62	9.45
-Alcohol related traffic fatalities (per 100)	24.14	29.95	21.13
-Alcohol use during pregnancy (per 1,000)	6.92	9.65	10.68
-Tobacco use during pregnancy (per 1,000)	82.05	67.40	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	357.88	283.68	306.98
-Adult arrests for violent crimes (per 100,000)	207.00	166.53	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	2027.98	1968.35	2220.55
-Juvenile arrests for property crimes (per 100,000)	3557.73	2755.51	3084.07
-Adult arrests for property crimes (per 100,000)	1108.36	1503.02	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	5.36	12.98	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	3.59	4.45	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	3.09	2.50	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	1.58	1.34	2.34
-Personal and property crime arrests, age 10-14 (per	23.89	18.70	22.53

Community Risk Profile: Selected Social Indicator Rates

Bullhead City, AZ: 1999

	Bullhead City	Mohave	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	266.43	239.13	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	208.00	150.76	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	5.20	4.63	4.41
-Free and reduced lunch program (per 100)	58.36	66.74	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	2966.27	3206.81	1215.88
-Juvenile drug-related arrests (per 100,000)	975.21	552.65	918.97
-Adult alcohol-related arrests (per 100,000)	974.01	1601.74	1523.65
-Adult drug-related arrests (per 100,000)	838.61	503.00	697.93
-Adult drunken driving arrests (per 1,000)	2.31	7.05	9.45
-Alcohol related traffic fatalities (per 100)	0.00	6.67	21.13
-Alcohol use during pregnancy (per 1,000)	19.92	24.07	10.68
-Tobacco use during pregnancy (per 1,000)	233.07	210.32	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	528.24	319.95	306.98
-Adult arrests for violent crimes (per 100,000)	362.52	248.22	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	3575.78	3294.07	2220.55
-Juvenile arrests for property crimes (per 100,000)	9183.26	5497.38	3084.07
-Adult arrests for property crimes (per 100,000)	2114.00	1419.08	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	10.56	12.13	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	0.00	1.70	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	13.05	7.89	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	7.18	6.96	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	78.93	39.58	22.53

Community Risk Profile: Selected Social Indicator Rates

South Tucson, AZ: 1999

	S. Tucson	Pima	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	399.20	136.22	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	*	79.44	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	8.10	3.14	4.41
-Free and reduced lunch program (per 100)	*	60.66	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	3461.06	1294.86	1215.88
-Juvenile drug-related arrests (per 100,000)	3213.84	1941.17	918.97
-Adult alcohol-related arrests (per 100,000)	7634.73	1611.86	1523.65
-Adult drug-related arrests (per 100,000)	4915.17	1200.98	697.93
-Adult drunken driving arrests (per 1,000)	44.91	7.98	9.45
-Alcohol related traffic fatalities (per 100)	*	28.46	21.13
-Alcohol use during pregnancy (per 1,000)	*	9.69	10.68
-Tobacco use during pregnancy (per 1,000)	*	78.44	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	1483.31	377.86	306.98
-Adult arrests for violent crimes (per 100,000)	1222.55	169.76	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	8529.05	3585.69	2220.55
-Juvenile arrests for property crimes (per 100,000)	4820.77	4047.01	3084.07
-Adult arrests for property crimes (per 100,000)	7310.38	1661.63	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	*	10.75	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	19.39	8.23	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	7.48	6.91	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	16.82	2.65	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	31.78	32.84	22.53

* These variables were not geocoded at South Tucson city level.

Community Risk Profile: Selected Social Indicator Rates

Casa Grande, AZ: 1999

	Casa Grande	Pinal	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	440.96	172.16	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	170.11	118.40	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	4.70	5.51	4.41
-Free and reduced lunch program (per 100)	59.31	64.40	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	4951.40	1360.58	1215.88
-Juvenile drug-related arrests (per 100,000)	1761.85	754.74	918.97
-Adult alcohol-related arrests (per 100,000)	3735.91	972.55	1523.65
-Adult drug-related arrests (per 100,000)	685.94	272.02	697.93
-Adult drunken driving arrests (per 1,000)	13.78	5.08	9.45
-Alcohol related traffic fatalities (per 100)	20.00	18.39	21.13
-Alcohol use during pregnancy (per 1,000)	6.00	9.58	10.68
-Tobacco use during pregnancy (per 1,000)	64.47	93.71	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	637.91	498.02	306.98
-Adult arrests for violent crimes (per 100,000)	355.22	154.66	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	6044.96	2151.26	2220.55
-Juvenile arrests for property crimes (per 100,000)	9507.90	3568.31	3084.07
-Adult arrests for property crimes (per 100,000)	3699.17	1270.05	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	12.15	15.99	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	12.36	9.36	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	5.84	3.47	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	13.63	4.28	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	92.46	30.73	22.53

Community Risk Profile: Selected Social Indicator Rates

Prescott, AZ: 1999

	Prescott	Yavapai	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	373.55	228.39	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	239.50	143.39	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	3.80	3.38	4.41
-Free and reduced lunch program (per 100)	33.73	70.48	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 100,000)	3637.03	2356.06	1215.88
-Juvenile drug-related arrests (per 100,000)	1249.08	991.31	918.97
-Adult alcohol-related arrests (per 100,000)	1455.05	1387.49	1523.65
-Adult drug-related arrests (per 100,000)	1177.56	594.89	697.93
-Adult drunken driving arrests (per 1,000)	3.74	7.94	9.45
-Alcohol related traffic fatalities (per 100)	0.00	24.14	21.13
-Alcohol use during pregnancy (per 1,000)	2.93	9.83	10.68
-Tobacco use during pregnancy (per 1,000)	173.02	151.20	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	661.28	400.60	306.98
-Adult arrests for violent crimes (per 100,000)	160.09	158.87	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	3122.70	2675.18	2220.55
-Juvenile arrests for property crimes (per 100,000)	5326.97	3870.18	3084.07
-Adult arrests for property crimes (per 100,000)	1309.19	1182.72	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	3.67	8.51	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	Not Available	6.10	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	8.48	6.67	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	13.33	6.89	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	46.64	31.59	22.53

Community Risk Profile: Selected Social Indicator Rates

Yuma, AZ: 1999

	Yuma	Yuma	Arizona
Availability of Drugs			
-Alcohol sales outlets (per 100,000)	453.13	172.21	148.09
-Tobacco sales outlets (per 100,000) - 1998 data	209.87	115.47	91.50
Extreme Economic and Social Deprivation			
-Unemployment (per 100)	21.30	29.82	4.41
-Free and reduced lunch program (per 100)	65.38	63.49	49.21
Substance Use			
-Juvenile alcohol-related arrests (per 1000,000)	1008.02	759.77	1215.88
-Juvenile drug-related arrests (per 100,000)	534.37	487.18	918.97
-Adult alcohol-related arrests (per 100,000)	670.25	876.08	1523.65
-Adult drug-related arrests (per 100,000)	214.76	272.16	697.93
-Adult drunken driving arrests (per 1,000)	3.14	4.63	9.45
-Alcohol related traffic fatalities (per 100)	20.00	17.86	21.13
-Alcohol use during pregnancy (per 1,000)	6.31	4.93	10.68
-Tobacco use during pregnancy (per 1,000)	23.29	18.66	73.34
Violence			
-Juvenile arrests for violent crimes (per 100,000)	206.46	185.59	306.98
-Adult arrests for violent crimes (per 100,000)	174.64	172.07	172.91
Non-violent Crime			
-Juvenile arrests for curfew, vandalism, disorderly conduct (per 100,000)	1967.45	1275.95	2220.55
-Juvenile arrests for property crimes (per 100,000)	1846.00	1391.95	3084.07
-Adult arrests for property crimes (per 100,000)	1123.38	961.55	1483.05
Adolescent Sexual Behavior			
-Birthrate among juveniles (per 1,000)	10.32	13.96	12.32
Family Conflict			
-Domestic violence arrests (per 1,000) (See Data Definitions)	Not Available	6.55	5.65
Early Initiation to Problem Behavior			
-Vandalism arrests, age 10-14 (per 1,000)	2.04	1.38	3.41
-Alcohol related arrests, age 10-14 (per 1,000)	2.22	2.03	2.34
-Personal and property crime arrests, age 10-14 (per 1,000)	14.46	11.34	22.53

DATA DEFINITIONS

Alcohol Sales Outlets:

SAMHSA Definition: The average yearly number of retail alcohol sales outlets on record in relationship to the total population. Reported as the number of alcohol sales outlets per 100,000 population.

Source: Arizona Department of Liquor Licenses and Control

Contact: Web site: www.azll.com

Time Period: Calendar year

ADHS Definition: The number of alcohol sales outlets, per 100,000 population.

1997 & 1999: Data were for calendar years 1997 and 1999 for all types of liquor licenses not including pending applications.

Process (using 1999 example): The liquor license master table was obtained 1/31/01 from the web site and saved as an Excel file. The following steps were then performed:

For all Active licenses:

- Omitted In state producers, out of state producers, Convynce (these were airlines), Ltd out state, out State producer, wholesaler
- Kept Bar, Beer/Wine Bar, Beer/Wine Store, Club, government, hotel, liquor store (includes grocery stores), microbrew, restaurant, winery
- Sorted by issue date, kept any license that was issued before 12/31/99

From the Inactive List:

- Extracted licenses with terminated, expired and cancelled status
- Repeated first two steps as done for active licenses
- Sorted the Cancelled status licenses by Status Date. Included the liquor license if the Status Date was prior to 12/31/98 (meaning that it was cancelled before 1/1/99 and was therefore inactive in 1999)
- Repeated with the Cancelled Status.
- Sorted Expired status licenses by Expiration date. Included licenses that were expired after 1/1/99.

Tobacco Sales Outlets: (1998)

SAMHSA Definition: Reported as the average yearly number of retail tobacco sales outlets on record in relationship to the total population. Reported as the number of retail tobacco sales outlets per 100,000 population.

Source: Arizona Bureau of Tobacco Education & Prevention Program

Contact: Brenda Flattum at (602) 870-3145

Time Period: Calendar year 1998

ADHS Definition: The number of tobacco sales outlets, per 100,000 population.

1998: Data were compiled by the Food & Drug Administration using the 1998 Edition 2 of PhoneDisk using SIC codes. The state tobacco program then processed the records using MatchWare to identify and correct duplicates. The state program also conducted checks to correct and add retailers throughout the state through March 2000. Data were not available for subsequent years due to the elimination of the Tobacco Education & Prevention Program.

New Home Construction:

SAMHSA Definition: Reported as the number of new building permits issued for single and multifamily dwellings, per 1,000 population.

Source: Arizona State University Real Estate Center

Contact: Alice Ann Petersen at (480) 965-7679

Time Period: Calendar year

ADHS Definition: The number of new building permits issued for single and multifamily dwellings, per 1,000 population.

1997 & 1999: Data were the number of new residential permits for calendar years 1997 & 1999 and did not include permits for commercial or industrial buildings. Data were compiled by the Arizona Real Estate Center, L. William Seidman Research Institute, College of Business, Arizona State University. Data excludes some cities in some counties.

1997: Cities that did **not** report new home construction:

County	City
Apache	Springerville
Cochise	Bisbee
Coconino	Fredonia
Gila	Hayden
Graham	Pima
Greenlee	Duncan
Maricopa	Buckeye
Pima	Oro Valley
Pinal	Superior
Santa Cruz	Nogalas
Yavapai	Jerome

1999: A hard copy only was faxed on 9/18/2000 and data at the county level were entered into an Excel spreadsheet. Cities that did not report new home construction:

County	City
Apache	Springerville
Gila	Hayden Miami
Greenlee	Duncan
La Paz	Parker
Maricopa	El Mirage Gila Bend Guadalupe
Navajo	Snowflake
Pima	Oro Valley
Santa Cruz	Nogalas Patagonia
Yavapai	Chino Valley Jerome

Households in Rental Properties: (1990)

SAMHSA Definition: Reported as the percentage of households living in rental housing. Calculated as: [Renter Occupied Units (H3)/Total Universe (H3)]*100. Data found in Census Data File STF1A.

Source: United States Census data file STF1A, 1990 census

Contact: Census Web Site: www.census.gov

Time Period: 1990 Census

ADHS Definition: The percentage of households in rental housing.

1990: For this report, data were obtained at the county level from Table H003 on the web site and were calculated as: Renter Occupied Units/Total Universe of occupied housing units*100.

Net Migration:

SAMHSA Definition: Reported as the number of new residents moving into an area minus the number of residents moving out of an area, per 1,000 total population.

Source: Arizona Department of Economic Security

Contact: Susan Kanzler at (602) 542-5984

Time Period: Calendar year

ADHS Definition: The number of new residents moving into an area minus the number of residents moving out, per 1,000 population.

1997: Data were obtained by county from the "Arizona Components of Population Change Report" received from DES in June, 1999. These data were "residual net migration." Estimates do not include the number of deaths and births within the area.

1999: Data were obtained by county from the "Arizona Components of Population Change Report" received from DES and dated 1/30/01. These data were "residual net migration."

Population Voting in Elections (1998 & 2000):

SAMHSA Definition: Reported as the percentage of the population registered to vote who vote in the November elections.

Source: Arizona Secretary of State, Elections Office

Contact: Elections Office at (602) 542-8683 for 1998 and Web Site for 2000 data

Time Period: November 1998 & 2000 elections

ADHS Definition: The percentage of registered voters who voted in the November elections.

1998: Data were from the Elections office in a report entitled General Election Official Canvass for the November 1998, election. Even year elections were selected to coincide with statewide and national elections. This information is currently available at www.sosaz.com.

2000: Data were from the 2000 General Election Official Canvass as calculated by the Office of the Arizona Secretary of State. Even year elections were selected to coincide with statewide and national elections. Data were obtained from www.sosaz.com.

Prisoners in State and Local Correctional Systems:

SAMHSA Definition: Reported as the duplicated number of new admissions to state and local prisons, by prisoner's county of residence, per 100,000 total population.

Source: Arizona Department of Corrections

Contact: Bob Stalcup at (602) 542-2102

Time Period: Calendar year

ADHS Definition: The number of new admissions to state and local prisons, by the county of commitment, per 100,000 population.

1997 & 1999: Available data included adult inmate admissions **by county of commitment**, not county of residence, for calendar years 1997 & 1999. Data were obtained in hard copy and transferred to electronic format.

Unemployment:

SAMHSA Definition: Reported as the percentage of labor force not employed, reported on an annual basis as a percentage of the total work force.

Source: Arizona Department of Economic Security, Division of Employee Services and Support, Research Administration

Contact: Web site: http://www.de.state.az.us/links/economic/webpage/page4.html

Time Period: Calendar year

ADHS Definition: The percentage of the labor force not employed.

1997 & 1999: Data were obtained from the Arizona Department of Economic Security (in conjunction with the US Department of Labor, Bureau of Labor Statistics) web site and were considered "preliminary data." Data covered full-time and part-time employees who worked during or received pay for the payroll period that included the 12th of the month. The data excluded self-employed, volunteers, unpaid family workers and domestic workers. Persons on sick leave, vacations or holidays, and being paid for that period by their employer were considered employed. Payroll and worker-hour data were collected for production and related workers in construction industries. Monthly data were averaged for the calendar year and percentages were calculated.

Free and Reduced Lunch Program:

SAMHSA Definition: Reported as a percentage of students in public schools (K-12) whose applications have been approved for the Federal Free and Reduced Lunch Program.

Source: Arizona Department Of Education, School Nutrition Program

Contact: Arizona Department Of Education (DOE) at 602-542-8708 for 1997-1998 and DOE Web site for 1999-2000

Time Period: School years 1997-1998 and 1999-2000

ADHS Definition: The percentage of students in public schools (K-12), including charter schools, whose applications have been approved for the Federal Free and Reduced Lunch Program.

1997 - 1998: Data were from the Arizona Department of Education School Nutrition Program report entitled Percentage of Free and Reduced Report 1997-1998. This report contained CTD/Agreement number, the school name, the grade span taught at the school, the total

number of students enrolled, total number of students participating in the Free and Reduced Lunch Program and the percentage of children participating.

In order to determine which schools were public (including charter), the list in the report was compared to the list of public and charter schools created from the DOE web site (http://www.ade.az.gov/wizard/default.asp) in July, 2000. Only schools that matched (i.e., those that were listed in the public, including charter, school list) were included in the data set used for this report.

1999 - 2000: Data were from the Arizona Department of Education School Nutrition Program report entitled Percentage of Free and Reduced Report 1999-2000 that was obtained on the internet at http://www.ade.az.gov/health-safety/cnp. This report contained CTD/Agreement number, the school name, the grade span taught at the school, the total number of students enrolled, total number of students participating in the Free and Reduced Lunch Program and the percentage of children participating.

In order to determine which schools were public (including charter), the list in the report was compared to the list of public and charter schools (with addresses) created from the DOE web site (http://www.ade.az.gov/wizard/default.asp) in June, 2001. Only schools that matched (i.e., those that were listed in the public, including charter, school list) were included in the data set. If a school name was different than the one on the public and charter school list, CTD codes and phone calls were used to determine whether it was the same school that was on the Free and Reduced Lunch Report. After verification that they were the same school, the school name was changed to the same as was on the June, 2001, list entitled *"All K-12 Districts and Schools Including Charter Schools"*.

Adults without High School Diplomas: (1990)

SAMHSA Definition: Reported as the percentage of total population aged 25 and older, who report the following level of educational attainment: Grades 9-12, no diploma. Data found in Census Data File STF3A, Table P57.

Source: United States Census data file STF3A, 1990 census

Contact: Census Web Site: www.census.gov

Time Period: 1990 Census

ADHS Definition: The percentage of the population, age 25 and older, that reported Grades 9-12, no diploma, level of educational attainment.

1990: Calculated, from Table P57, as the number of adults, 25 years and older who reported the following level of educational attainment: grades 9-12, no diploma.

Single Parent Family Households: (1990)

SAMHSA Definition: Reported as a percentage of family households with spouse absent. Calculated as: [Other family (male and female, no spouse present)/(married couple family - other family)]*100. Domain: Family households with children.

Source: United States Census data file STF1A, 1990 census

Contact: Census Web Site: www.census.gov

Time Period: 1990 Census

ADHS Definition: The percentage of family households with the spouse absent.

1990: Calculated, from Table P18, as: [other family (male and female, no spouse present)/(married couple family +other family)]*100. Domain: family households with children (age 0-17).

Temporary Assistance for Needy Families - TANF (previously Aid to Families with Dependent Children): (1999)

SAMHSA Definition: Reported as the rate of persons (all ages) participating in the federal Aid to Families with Dependent Children (AFDC) program, per 1,000 population.

Source: Department of Economic Security

Contact: Maureen Jeppeson at mjeppeson@mail.de.state.az.us

Time Period: Calendar Year

ADHS Definition: The average monthly number of individuals participating in the TANF (Temporary Assistance for Needy Families) program, per 1,000 population.

Food Stamp Recipients:

SAMHSA Definition: Reported as the average monthly number of food stamp recipients, per 1,000 population.

Source: Department of Economic Security

Contact: Maureen Jeppeson at mjeppeson@mail.de.state.az.us

Time Period: Calendar Year

ADHS Definition: The average monthly number of individuals receiving food stamps, per 1,000 population.

Juvenile Alcohol Related Arrests:

SAMHSA Definition: Reported as the juvenile (age 10-17) arrest rate for alcohol violations (DUI, liquor law violations, drunkenness), per 100,000 juveniles (age 10-17).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of juveniles (age 10-17) arrested for alcohol violations (DUI, liquor law violations, drunkenness), per 100,000 juveniles.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Alcohol-related arrests consisted of arrests for DUI and liquor law violations and were identified as any arrests with one of the following UCR offense codes:

DUI	UCR -210
Liquor Law Violations	UCR -220

Juvenile Drug Related Arrests:

SAMHSA Definition: Reported as the juvenile (age 10-17) arrest rate for drug law violations (possession, sale, use, growing, manufacturing of illegal drugs), per 100,000 juveniles (age 10-17).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of juveniles (age 10-17) arrested for drug law violations (possession, sale, use, growing, manufacturing of illegal drugs), per 100,000 juveniles.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Drug-related arrests consisted of arrests for possession, sale, use, and growing and manufacturing illegal substances and were identified as any arrests with one of the following UCR offense codes:

Sale/Manufacturing: Opium, Cocaine, Heroin, Derivatives	UCR -181
Sale/Manufacturing: Marijuana	UCR -182

Self/Manufacturing: Synthetic Narcotics	UCR -183
Sale/Manufacturing: Other Dangerous Non-narcotic drugs	UCR -184
Possession: Opium, Cocaine, Heroin, Derivatives	UCR -185
Possession: Marijuana	UCR -186
Possession: Synthetic Narcotics	UCR -187
Possession: Other Dangerous Non-narcotic Drugs	UCR -188

Adult Alcohol-Related Arrests:

SAMHSA Definition: Reported as the rate of adult arrests for alcohol-related crimes (DUI, liquor law violations, drunkenness) per 100,000 adults (age 18 & older).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adults (age 18 and older) arrested for alcohol-related crimes (DUI, liquor law violations, drunkenness), per 100,000 adults.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Adult alcohol-related arrests consisted of arrests for DUI and liquor law violations and were identified as any arrests with one of the following UCR offense codes:

DUI	UCR -210
Liquor Law Violations	UCR -220

Adult Drug-Related Arrests:

SAMHSA Definition: Reported as the rate of adult arrests for drug-related crimes (illegal possession, sale, use, manufacturing, growing of illegal drugs) per 100,000 adults (age 18 & older).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adults (age 18 and older) arrested for drug-related crimes (illegal possession, sale, use, manufacturing, growing of illegal drugs) per 100,000 adults.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999.

UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Drug-related arrests consisted of arrests for possession, sale, use, and growing and manufacturing illegal substances and were identified as any arrests with one of the following UCR offense codes:

Sale/Manufacturing: Opium, Cocaine, Heroin, Derivatives	UCR -181
Sale/Manufacturing: Marijuana	UCR -182
Self/Manufacturing: Synthetic Narcotics	UCR -183
Sale/Manufacturing: Other Dangerous Non-narcotic drugs	UCR -184
Possession: Opium, Cocaine, Heroin, Derivatives	UCR -185
Possession: Marijuana	UCR -186
Possession: Synthetic Narcotics	UCR -187
Possession: Other Dangerous Non-narcotic Drugs	UCR -188

Adult Drunken Driving Arrests:

SAMHSA Definition: Reported as the adult (age 18 & older) arrest rate for drunken driving (DUI, DWI), per 1,000 adults (age 18 & older).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adults (age 18 and older) arrested for drunken driving (DUI, DWI), per 1,000 adults.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Adult drunken driving arrests consisted of arrests for DUI and were identified as any arrests with one of the following UCR offense codes:

DUI	UCR –210

Alcohol-Related Traffic Fatalities:

SAMHSA Definition: Reported as the percentage of all traffic fatalities related to alcohol.

Source: U.S. Department of Transportation

Contact: Tonja Lindsey at (202) 366-0854 (Washington, D.C.)

Time Period: Calendar year

ADHS Definition: The percentage of all traffic fatalities related to alcohol.

1997 & 1999: Data were from calendar years 1997 and 1999 and included all traffic fatalities in Arizona. GSA City/County Codes for Arizona and the 1997 and 1999 Fatality Analysis Reporting System Coding and Validation Manual allowed calculation of counts of alcohol-related accidents with fatalities by county.

Alcohol Use during Pregnancy:

SAMHSA Definition (Drug Use During Pregnancy): Reported as the number of pregnant women receiving Alcohol, Tobacco and Other Drug treatment from state-supported treatment centers, per 1,000 live births.

The variable of Drug Use during Pregnancy was not available for the state of Arizona. Two variables were substituted: Alcohol Use During Pregnancy and Tobacco Use During Pregnancy.

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics.

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: Alcohol Use During Pregnancy: The number of live born infants whose mother reported she had used alcohol during the pregnancy, per 1,000 live births.

1997 & 1999: County of the event was coded by residence of the mother. Birth certificate data were obtained from the Vital Registration System Annual Statistical Files from 1997 and 1999 CD-ROMs issued by the Arizona State Department of Health, Center for Health Statistics (now entitled the Bureau of Public Health Statistics, Office of Epidemiology and Statistics). The CD-ROMs contained information on zip code and county of residence of the mother and whether the mother reported use of alcohol during the pregnancy.

Tobacco Use during Pregnancy:

SAMHSA Definition (Drug Use during Pregnancy): Reported as the number of pregnant women receiving Alcohol, Tobacco and Other Drug treatment from state-supported treatment centers, per 1,000 live births.

The variable of Drug Use during Pregnancy was not available for the state of Arizona. Two variables were substituted: Alcohol Use During Pregnancy and Tobacco Use During Pregnancy.

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics.

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definitions: Tobacco Use During Pregnancy: The number of live born infants whose mother reported she had used tobacco during the pregnancy, per 1,000 live births.

1997 & 1999: County of the event was coded by residence of the mother. Birth certificate data were obtained from the Vital Registration System Annual Statistical Files from 1997 and 1999 CD-ROMs issued by the Arizona State Department of Health, Center for Health Statistics (now entitled the Bureau of Public Health Statistics, Office of Epidemiology and Statistics). The CD-ROMs contained information on zip code and county of residence of the mother and whether the mother reported use of tobacco during the pregnancy.

Juvenile Arrests for Violent Crimes:

SAMHSA Definition: Reported as the juvenile (age 10-17) arrest rate for "Crimes Against Persons" (homicide, aggravated assault, robbery, rape) per 100,000 juveniles (age 10-17).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of juveniles (age 10-17) arrested for violent crimes (homicide, aggravated assault, robbery, rape) per 100,000 juveniles.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Arrests for violent crimes consisted of arrests for homicide, aggravated assault, robbery and rape and were identified as any arrest with one of the following UCR offense codes:

Murder/Non-negligent Manslaughter	UCR -10
Aggravated Assault	UCR -40
Robbery	UCR -30
Forcible Rape	UCR -20

Adults Arrests for Violent Crimes:

SAMHSA Definition: Reported as the rate of adult arrests for violent crimes (criminal homicide, rape, robbery, aggravated assault), per 100,000 adults (age 18 & older).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adults (age 18 and older) arrested for violent crimes (homicide, aggravated assault, robbery, rape) per 100,000 adults.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Arrests for violent crimes consisted of arrests for homicide, aggravated assault, robbery and rape and were identified as any arrest with one of the following UCR offense codes:

Murder/Non-negligent Manslaughter	UCR -10
Aggravated Assault	UCR -40
Robbery	UCR -30
Forcible Rape	UCR -20

Homicides:

SAMHSA Definition: Reported as the number of homicide victims (murder & nonnegligent manslaughter) per 100,000 total population. Includes deaths resulting from legal intervention.

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: The number of homicide victims (murder & nonnegligent manslaughter) per 100,000 total population, by county of death.

1997 & 1999: Death certificate data were obtained from the Vital Registration System Annual Statistical Files, 1997 and 1999 CD-ROMs, issued by the Arizona State Department of Health Services, Center for Health Statistics (now entitled the Bureau of Public Health Statistics, Office of Epidemiology and Statistics). The CD-ROMs contained information on the age, sex, race, zip code, county of residence and county of death, and underlying cause of death for all deaths occurring in Arizona, plus most deaths of Arizona residents that occurred out of state. The underlying cause of death was the condition or event that initiated the chain of events leading to death. Underlying cause of death, as determined by a physician, medical examiner, or coroner was coded according to the 9th Revision of the International Classification of Diseases (ICD-9).

Homicides were defined as any death that had an ICD-9 code (from field “ICD3”) between 960 and 978, including murder, non-negligent manslaughter and death related to legal intervention.

Data are reported by the county where the death occurred (from field “county”).

Juvenile Arrests for Curfew, Vandalism, and Disorderly Conduct:

SAMHSA Definition: Reported as the juvenile (age 10-17) arrest rate for curfew, vandalism, and disorderly conduct, per 100,000 juveniles (age 10-17).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of juveniles (age 10-17) arrested for curfew, vandalism, and disorderly conduct, per 100,000 juveniles.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Juvenile Arrest for Curfew, Vandalism and Disorderly Conduct consisted of arrests for curfew, vandalism and disorderly conduct and were identified as any arrest with one of the following UCR offense codes:

Curfew/Loitering	UCR -280
Vandalism	UCR -140
Disorderly Conduct	UCR -240

Juvenile Arrests for Property Crimes:

SAMHSA Definition: Reported as the juvenile (age 10-17) arrest rate for "Crimes Against Property" (burglary, larceny theft, arson, motor vehicle theft) per 100,000 juveniles (age 10-17).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of juveniles (age 10-17) arrested for property crimes (burglary, larceny theft, arson, motor vehicle theft), per 100,000 juveniles.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Juvenile Arrest for Property Crimes consisted of arrest for burglary, larceny, theft, arson, motor vehicle theft and were identified as any arrest that had one of the following UCR offense codes:

Burglary	UCR -50
Larceny Theft	UCR -60
Arson	UCR -80
Motor Vehicle Theft	UCR -70

Adult Arrests for Property Crimes:

SAMHSA Definition: Reported as the rate of adult arrests for property crimes (burglary, larceny theft, arson, motor vehicle theft), per 100,000 adults (age 18 & older).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adults (age 18 and older) arrested for property crimes (burglary, larceny theft, arson, motor vehicle theft), per 100,000 adults.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Adult arrests for Property Crimes consisted of arrest for burglary, larceny, theft, arson, motor vehicle theft and were identified as any arrest that had one of the following UCR offense codes:

Burglary	UCR -50
Larceny Theft	UCR -60
Arson	UCR -80
Motor Vehicle Theft	UCR -70

Adolescent Suicide:

SAMHSA Definition: Reported as the rate of successful suicides by juveniles (age 10-17) per 1,000 juveniles (age 10-17).

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: The number of completed suicides by juveniles (age 10-17), per 1,000 juveniles, by county of residence. Arizona total includes suicides with unknown county of residence.

1997 & 1999: Death certificate data were obtained from the Vital Registration System Annual Statistical Files from 1997 and 1999 CD-ROMs issued by the Arizona State Department of Health Services, Center for Health Statistics (now entitled the Bureau of Public Health Statistics, Office of Epidemiology and Statistics). The CD-ROMs contained information on the age, sex, race, zip code, county of residence and county of death, and underlying cause of death for all

deaths occurring in Arizona, plus most deaths of Arizona residents that occurred out of state. Suicides were attributed to county of residence, although the Arizona total included all suicides occurring in Arizona. The underlying cause of death was the condition or event that initiated the chain of events leading to death. Underlying cause of death, as determined by a physician, medical examiner, or coroner was coded according to the 9th Revision of the International Classification of Diseases (ICD-9). Suicide was defined on death certificates by ICD9 codes (from field ICD3): 950-959. County of residence of the death (from field "cntyres") was used in the estimates. Arizona total included all adolescent suicides.

Adolescent Pregnancies:

SAMHSA Definition: Reported as the rate of pregnancies (live births, abortions, miscarriages) per 1,000 females (age 10-17).

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: The number of adolescent (age 10 – 17) pregnancies (live births, abortions, miscarriages), per 1,000 adolescent females.

1997: These data were obtained from Table 10 in the Vital Statistics 1997 Report entitled "Pregnancy and Pregnancy Rates, Females 19 or Less Years Old, By County of Residence, Arizona, 1997." ADHS measures pregnancies as the sum of three components: live births, fetal deaths (or stillbirths) and abortions to Arizona resident adolescent women. It does not include spontaneous fetal losses that occur at less than 20 weeks of gestation. Induced terminations of pregnancy do not include those performed out-of-state to Arizona residents, since they are not reported.

1999: These data were obtained from Table 10 in the ADHS, Office of Epidemiology and Statistics, publication entitled "Teenage Pregnancy: Arizona, 1989-1999."

Birthrate among Juveniles:

SAMHSA Definition: Reported as the rate of live births per 1,000 women (ages 10-17).

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: The number of adolescent (age 10 – 17) births, per 1,000 adolescent females.

1997 & 1999: County of the event was coded by residence of the mother. Birth certificate data were obtained from the Vital Registration System Annual Statistical Files from 1997 & 1999 CD-ROMs issued by the Arizona Department of Health Services, Center for Health Statistics (now entitled the Bureau of Public Health Statistics, Office of Epidemiology and Statistics). The CD-ROMs contain information on the age of the mother, zip code and county of residence and county of birth, for all births occurring to Arizona residents.

Children Living Away from Parents: (1990)

SAMHSA Definition: Reported as the rate of children (age 0-17) living in home situations other than with one or both parents or guardians, per 1,000 children (age 0-17). Calculated as: [(Householder or Spouse + Other relative + Non-relatives + In Group Quarters)/Total Universe] * 1000. Data found in Census Data File STF1A, Table P21.

Source: United States Census data file STF1A, 1990 census.

Contact: Census Web Site: www.census.gov

Time Period: 1990 Census

ADHS Definition: The number of children (age 0-17) living in home situations other than with one or both parents or guardians, per 1,000 children.

1990: Calculated from Table P21 as [Householder or Spouse + Other relative + Non-relatives + In Group Quarters]/Total Universe.

Children Living in Foster Care: (1998 & 1999)

SAMHSA Definition: Reported as the duplicated average daily rate of children (age 0-17) in state-supervised, family-based foster care, regardless of parental rights termination or length of care, per 1,000 children (age 0-17).

Source: Arizona Department of Economic Security

Contact: Nicholas Espadas (nicholas.espadas@mail.de.state.az.us) at (602) 542-3969

Time Period: Calendar year

ADHS Definition: The number of children (age 0-17) living in state-supervised, family-based foster care, regardless of parental rights termination or length of care, per 1,000 children. 1998 data were number of “out-of-home care”; 1999 were number “removed from home at least one day.”

1998 & 1999: Data were obtained for the calendar years 1998 & 1999 in hard copy as counts by zip codes where the child was placed, not where the child originally resided. Zip codes were assigned to a county using a listing of geographic correlation from the US Census Bureau. In cases where the zip code was in more than one county, the county with the largest population within that zip code was assigned those children.

1998 data were the number of children in "out-of-home care" on December 31, 1998, based on Provider Service Authorization information.

1999 data were the number of children who had been "removed from home at least one day" during the entire calendar year. Data were collected by DES through the Removal Based Method.

Divorce:

SAMHSA Definition: Reported as the rate of divorce (dissolutions & annulments) per 1,000 population.

Source: Arizona Department of Health Services, Bureau of Public Health Statistics, Office of Epidemiology and Statistics

Contact: Christopher Mrela, Ph.D. at (602) 542-1216

Time Period: Calendar year

ADHS Definition: The number of divorces (dissolutions and annulments), per 1,000 population.

1997 & 1999: Data were obtained from the 1997 and 1999 ADHS publications of the Arizona Health Status and Vital Statistics, Table 5G-6, that were entitled "Dissolutions of Marriage by County of Occurrence by Month."

Domestic Violence Arrests:

SAMHSA Definition: Reported as the rate of domestic violence arrests of partners (including spouses, former spouses, and lovers), per 1,000 adults (age 18 & older). Does not include arrests for child abuse.

Source: Governor's Division for Prevention of Family Violence

Contact: Donna Irwin at (602) 542-1773

Time Period: Calendar Year

ADHS Definition: The number of reported domestic violence arrests of adults, per 1,000 adults (age 18 and older). Not routinely reported by all jurisdictions. **These are serious underestimates.**

1997 & 1999: It should be noted that jurisdictions voluntarily report domestic violence arrests, therefore, only those jurisdictions that sent their report to the Governor's Division for Prevention of Family Violence have their data included in this report. Those jurisdictions that did not submit data were not, however, excluded from the county population denominator, so the rates are **serious** underestimates.

In addition, for the following locations and years, the exact data were repeated for each quarter of the year: (1) Cochise County, 1999; (2) Gilbert, 1999; (3) Tohono O'odham, 1997; & (4) Yavapai County, 1997.

The following table indicates which jurisdictions were included in this report; however, some jurisdictions did not report data for all quarters:

County	Jurisdiction	1997	1999
Apache	Apache County Sheriff's Department	X	X
	Eagar	X	X
	San Carlos	O	X
	Springerville	X	X
	St. Johns	X	X
Cochise	Benson	X	X
	Bisbee	X	O
	Cochise County Sheriff's Department	X	X
	Douglas	X	X
	Huachuca City	X	X
	Sierra Vista	X	X
	Tombstone	X	X
	Willcox DPS	X	X
Coconino	Coconino County Sheriff's Department	X	X
	Flagstaff	X	X
	Fredonia	O	X
	NAU	X	X
	Page	X	X
	Williams	X	O
Gila	Gila County Sheriff's Department	X	O
	Globe	X	X
	Miami	X	X
	Payson	X	X
Graham	Pima	X	X
	Safford	X	X
	Thatcher	X	X
Greenlee	Clifton	X	X
	Greenlee County Sheriff's Department	X	X
La Paz	La Paz County Sheriff's Department	X	X
	Parker	X	X
	Quartzside	X	X
Maricopa	Arizona DPS	X	X
	Arizona State Capitol Police	X	X
	Arizona State University	X	X

County	Jurisdiction	1997	1999
	Arizona State University West DPS	X	X
	Avondale	X	X
	Buckeye	X	X
	Chandler	X	X
	El Mirage	X	X
	Gilbert	X	X
	Glendale	X	X
	Goodyear	O	X
	Hayden	X	X
	Maricopa County Sheriff's Department	X	X
	Mesa	X	X
	Paradise Valley	X	X
	Peoria	X	X
	Phoenix	X	X
	Scottsdale	X	O
	Surprise	X	X
	Tempe	X	X
	Tolleson	X	X
	Wickenburg	X	X
	Youngtown	X	X
Mohave	Bullhead City	X	X
	Colorado City	X	X
	Kingman	X	X
	Lake Havasu	X	X
	Mohave County Sheriff's Department	X	X
Navajo	Holbrook	X	X
	Navajo County Sheriff's Department	X	X
	Pinetop-Lakeside	X	X
	Showlow	X	X
	Snowflake-Taylor	X	X
	Winslow	X	X
Pima	Marana	X	X
	Oro Valley	X	X
	Pima County Sheriff's Department	O	X
	South Tucson	X	X
	Tohono O'odham Nation	X	O
	Tucson	X	X
	University of Arizona	X	X
	Pima College	X	X
Pinal	Apache Junction	X	X
	Casa Grande	X	X
	Coolidge	X	X
	Eloy	X	X
	Florence	X	O
	Kearny	X	X
	Mammoth	X	X
	Pinal County Sheriff's Department	X	X
	Superior	X	X

County	Jurisdiction	1997	1999
Santa Cruz	Nogales	X	X
	Patagonia	X	X
	Santa Cruz Sheriff's Department	X	X
Yavapai	Camp Verde	X	X
	Central Arizona College	X	X
	Chino Valley	X	X
	Clarkdale	X	X
	Cottonwood	X	X
	Jerome	O	X
	Prescott Valley	X	X
	Sedona	X	X
	Yavapai Community College	X	X
	Yavapai County Sheriff's Department	X	X
Yuma	Arizona Western College	X	X
	San Luis	X	O
	Somerton	X	X
	Wellton	X	X
	Yuma County Sheriff's Department	X	X
	Yuma	X	X

Event Dropouts:

SAMHSA Definition: Reported as the percentage of students (grades 9-12) who drop out of school in a single year without completing high school.

Source: Arizona Department Of Education

Contact: Web site at www.ade.state.az.us/ResearchPolicy/DropoutInfo/Default.htm

Time Period: School years 1997-1998 and 1999-2000.

ADHS Definition: The percentage of students (grades 9-12) who dropped out of school in a single year without completing high school.

1997-98 & 1999-2000: Data were from the Arizona Department of Education web site and were provided by the department as percentages by county.

Status Dropouts: (1990)

SAMHSA Definition: Reported as the percentage of adolescents (ages 16-19) who have not completed high school and are not enrolled in school, regardless of when they dropped out. Calculated as: [(Armed Forces: not enrolled in school, not high school graduate + Civilian: not enrolled in school, not high school graduate]/ Total Universe (population age 16-19)] * 100. Data found in Census Data File STF3A, Table P61.

Source: United States Census data file STF3A, 1990 census

Contact: Census Web Site: www.census.gov

Time Period: 1990 Census

ADHS Definition: The percentage of adolescents (age 16 - 19) who have not completed high school and are not enrolled in school, regardless of when they dropped out.

1990: Calculated from table P61 as: [(Armed Forces: not enrolled in school, not high school graduate + Civilian: not enrolled in school, not high school graduate)/ Total Universe (population age 16-19).

Dropouts Prior to 9th Grade:

SAMHSA Definition: Reported as the number of students (grades 7-8) dropping out of school prior to ninth grade per 1,000 students (grades 7-8).

Source: Arizona Department of Education

Contact: Web site at www.ade.state.az.us/ResearchPolicy/DropoutInfo/Default.htm

Time Period: School years 1997-1998 and 1999-2000

ADHS Definition: The percentage of students (grades 7 - 8) who dropped out of school prior to the ninth grade.

1997-98 & 1999-2000: Data were from the Arizona Department of Education web site and were provided by the department as percentages by county.

Vandalism Arrests, Ages 10-14:

SAMHSA Definition: Reported as the rate of adolescents (age 10-14) arrested for vandalism (including residence, non-residence, vehicle venerated objects, police cars, or other), per 1,000 adolescents (age 10-14).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adolescents (age 10-14) arrested for vandalism (including residence, non-residence, vehicle venerated objects, police cars, or other), per 1,000 adolescents.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Adolescent vandalism consisted of arrest for vandalism (including residences, non-residences, vehicle venerated objects, police cars, or other) and were identified as any arrest that had a UCR offense code as follows:

Vandalism	UCR -140

Alcohol-Related Arrest, Ages 10-14:

SAMHSA Definition: Reported as the rate of adolescents (age 10-14) arrested for alcohol (DUI, drunkenness, liquor law violations) violations, per 1,000 adolescents (age 10-14).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adolescents (age 10-14) arrested for alcohol (DUI, drunkenness, liquor law violations) violations, per 1,000 adolescents.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Adolescent alcohol related arrests consisted of arrests for DUI and liquor law violations and were identified as any arrests with one of the following UCR offense codes:

DUI	UCR -210
Liquor Law Violations	UCR -220

Personal and Property Crimes Arrests, Ages 10-14:

SAMHSA Definition: Reported as the rate of adolescents (age 10-14) arrested for personal (criminal homicide, aggravated assault, robbery, rape) and property (burglary, larceny theft, arson, motor vehicle theft) crimes, per 1,000 adolescents (age 10-14).

Source: Arizona Department of Public Safety

Contact: Lynn Allman at (602) 223-2263

Time Period: Calendar year

ADHS Definition: The number of adolescents (age 10-14) arrested for personal (criminal homicide, aggravated assault, robbery, rape) and property (burglary, larceny theft, arson, motor vehicle theft) crimes, per 1,000 adolescents.

1997 & 1999: Data from the file, Record Type5, contained information on the age, sex, race, county and city of arrest, and the UCR- offense code for all arrests committed in 1997 & 1999. UCR-offense codes were recorded at the scene of the crime by local Sheriffs and police officers. Personal and property crime arrests, for youth ages 10-14, consisted of arrests for personal crimes (homicide, aggravated assault, robbery, rape) and property crimes (burglary, larceny, theft, arson, motor vehicle theft) and were identified as any arrests with one of the following UCR offense codes:

Murder/Non-negligent Manslaughter	UCR -10
Aggravated Assault	UCR -40
Robbery	UCR -30
Forcible Rape	UCR -20
Burglary	UCR -50
Larceny Theft	UCR -60
Arson	UCR -80
Motor Vehicle Theft	UCR -70

Population/Denominator Data for Counties:

Source: Arizona Department of Economic Security, Research Administration, Population Statistics Unit

ADHS Definition: The population data for all county variables by age and gender are projections from 1990 census for 1997 and 1999.

1997 & 1999: Two tables from the Arizona DES were used to determine the populations for the age and gender categories used in this report. One table was obtained from the web site www.de.state.az.us/links/economic/webpage/popweb/T2001web.html). These tables were dated February 1997 and contained projections for each county by gender and age categories in four-year increments up to "95+." Another table was obtained directly from DES and was approved by the Arizona DES Director August 1, 1997. These tables contained the same projections by county in one-year increments, up to age 19.

In order to obtain the population estimates in the age categories required in this report (i.e., 0 – 17, 10-14, and over 18 years of age), the one-year increment tables were used to subtract years from the age categories in four-year increments and the total projections for each county.

Population/Denominator Data for Cities:

Source: Claritis, Inc.

ADHS Definition: The population (or denominator) data for all city variables by age categories and gender are projections provided by Claritis, Inc., from the 1990 census for 1997 and 1999.

Note: Population estimates used in the prior report of 1997 data (entitled Risk Monitoring Report One) differ slightly from this report. All rates in this Final Report were recalculated using the population estimates described above.

PRELIMINARY DEVELOPMENT OF SOCIAL INDICATOR INDICES

Introduction

It is useful for program planners to have frequency information on all social indicator variables for each of Arizona's fifteen counties. It is also equally useful to see each county's relative frequency on all social indicator variables compared with those of the other fourteen Arizona counties. At some point during the process of examining a county's absolute and relative performance, it is likely that program planners will attempt to move from the simple review of single variables considered on a one-by-one basis to an interpretation that seeks a more global meaning from the range of data and factors presented to them.

Reaching for a more relevant and succinct interpretation is the primary motivation behind the attempt to develop and report on a set of preliminary indices as derived from the larger set of social indicator variables. Such indices should cluster highly related variables into cohesive and similarly interpretable risk groups. They should allow for the computing of an index average – a summarizing of multiple values into a single value – and to provide a simplified and more comprehensive interpretation of the variables.

The derivation of social indicator indices can be accomplished through a systematic and highly visible process, one that is first conceptual and then mathematical. To begin, there must be a grouping of those individual variables that are conceptually linked, which can be readily interpretable as representative of a larger and more inclusive 'idea.' For example, five individual adult arrest variables exist in both the 1997 and 1999 social indicator data sets. It is conceptually possible that these five individual measures all represent related facets of a larger, more inclusive idea of 'adult conflict with the law.' This conceptual linking is frequently based on the literature, for example, following Hawkins and Catalano's model.

Next in the index development process, the variables that are conceptually grouped must provide their own evidence, in the form of bivariate correlation coefficients within the data, demonstrating that positive and significant relationships do exist among the grouped variable sets. Finally, a process of modeling these variable groups is undertaken that will attempt to account for the full set of underlying interrelationships - as expressed in the inter-correlations among variables - and provide a justification for their inclusion into a single index. During this process, individual variables may be retained in the variable set or rejected, on the basis of having or not having consistently positive and important relationships with other variable set members.

Index variables can then be consolidated and summarized. It may be possible to attempt to attach defensible labels as to the increased 'risk' found to be associated with increased values of specific variables, or the increased 'protectiveness' found to be associated with increased values of other variables. The indices themselves will thus provide a more concise picture of a county's health status while highlighting areas of concern, areas of good standing, and areas of change.

A similar process was utilized by the New York State Office of Alcoholism and Substance Abuse Services, which was also funded by SAMHSA to assess their state's prevention needs

through a social indicator study (1997). They developed a set of risk constructs and indices based on locally available variables. The initial step in development of Arizona indices was to examine how Arizona data variables fit into the New York State's Ecological Risk Model. The Arizona 1997 data did not fit the New York State models and we proceeded with further development.

Method

Conceptual process

As stated above, preliminary social indicator indices can be derived through a process that is both systematic and – critically - transparent, regardless of one's level of familiarity with the actual conceptual and mathematical modeling process itself. Individual social indicator variables from the 1997 data set were grouped together in conceptually related clusters on the basis of their interpretability as individual, though representative, measures of larger, more inclusive concepts. Five conceptual indices were thus identified: 1) **Negative Environmental Aspects**, grouping 15 variables; 2) **Educational Status**, grouping 5 variables; 3) **Adult Legal Conflict**, grouping 5 variables; 4) **Youth Legal Conflict**, grouping 8 variables; and 5) **Positive Environmental Aspects**, grouping 5 variables.

The potential variables included in the initial conceptual model were as follows:

1) Negative Environmental Aspects, containing 15 variables:

- Adolescent Pregnancies
- Adolescent Suicides
- Alcohol Sales Outlets
- Alcohol Traffic Fatalities
- Birthrate: Juveniles
- Children Living Away from Home
- Divorce
- Domestic Violence
- Homicides
- Households in Rental
- Mothers Who Used Alcohol During Pregnancy
- Mothers Who Used Tobacco During Pregnancy
- Prisoners
- Single Parent Households
- Tobacco Sales Outlets

2) Educational Status, containing 5 variables:

- Adults without a HS Diploma
- Dropouts Prior to 9th Grade
- Event Dropouts
- Free and Reduced Lunch Program Participants
- Status Dropouts

3) Adult Legal Conflict, containing 5 variables:

- Adult Arrests: Alcohol-Related
- Adult Arrests: Drug-Related
- Adult Arrests: Drunken Driving
- Adult Arrests: Property Crime
- Adult Arrests: Violent Crime

4) Youth Legal Conflict, containing 8 variables:

- Age 10-14 Arrests: Alcohol-Related
- Age 10-14 Arrests: Personal Property
- Age 10-14 Arrests: Vandalism
- Juvenile Arrests: Alcohol-Related
- Juvenile Arrests: Curfew, Vandalism
- Juvenile Arrests: Drug-Related
- Juvenile Arrests: Property
- Juvenile Arrests: Violent Crime

5) Positive Environmental Aspects, containing 5 variables:

- Children in Foster Care
- Employment*
- Net Migration
- New Home Construction
- Population Voting in Elections

*Based on the original variable "Unemployment" (where "Employment" = 100 – "Unemployment")

Mathematical process

Next, the bivariate correlation coefficients of those variables grouped together on a conceptual basis were inspected for demonstrable evidence of the existence of positive and important bivariate relationships; "important" was defined as variable pairs presenting correlation coefficients of at least 0.20 or greater.

Note that at this point in the mathematical process no "inclusion" or "exclusion" decisions (i.e., to retain a variable in a conceptual set or to reject it as being unimportantly related) were made concerning individual variables. Although it was evident for many variables that their relationships to other variables within the set were consistently negative, or were inconsistent in direction, or had correlation coefficients of less than 0.20, decisions were reserved until the actual modeling stage of the process. This 'decision reservation' was made for the simple reason that it is only during actual modeling itself that the multiple bivariate relationships among the conceptual construct can be examined *simultaneously, as a set*, rather than merely on a pair-by-pair, basis.

Lastly, the modeling of the five grouped variable sets or constructs was undertaken. This modeling attempted to provide an accounting of all underlying interrelationships of the full set of

grouped variables. At the same time, the modeling was also an attempt to test the reasonableness of the theory that, in fact, individual variables included in a variable set could be considered as representative and observable measures of a single, more comprehensive, global idea. Successful modeling would thus provide evidence for conceptually and mathematically related variable constructs whose individual members had consistently demonstrated both positive and important inter-relationships. This evidence would be considered a justification for the inclusion of the variable into a single reportable index. During modeling, individual variables were either retained in the variable set or were rejected, all on the basis of their either having or not having consistently positive and process-defined 'important' relationships with other variable set members. For all intents and purposes, this modeling might be termed confirmatory factor analysis.

During this development, it was not the reported variable rates that were of interest, but rather the inter-relationships among the reported variable rates. The correlation matrices of the five grouped variable sets became the basic data of import. The five 1997 grouped variable set correlation matrices are presented below.

Negative Environmental Aspects (15 variables)

	AdlPrg	AdlSui	AlSale	AFatal	AlcPrg	JBirth	ChdAwy	Divorc	DoViol	Homicd	Rental	Prison	SngPar	ToSale	TobPrg
AdlPrg	1.00														
AdlSui	-0.08	1.00													
AlSale	-0.57	-0.44	1.00												
AFatal	0.28	0.00	-0.51	1.00											
AlcPrg	-0.23	0.26	0.07	-0.07	1.00										
JBirth	0.90	0.04	-0.46	0.01	-0.03	1.00									
ChdAwy	0.07	0.39	-0.18	-0.44	0.51	0.32	1.00								
Divorc	0.26	-0.25	-0.09	0.63	0.02	0.13	-0.52	1.00							
DoViol	-0.31	-0.29	0.27	-0.34	0.22	-0.29	-0.16	-0.14	1.00						
Homicd	-0.23	0.59	-0.34	0.11	0.38	-0.19	0.15	-0.27	0.21	1.00					
Rental	-0.21	-0.20	0.06	0.09	-0.53	-0.42	-0.67	-0.09	0.52	0.18	1.00				
Prison	0.08	-0.05	0.33	0.18	-0.05	0.12	-0.28	0.30	-0.22	-0.37	-0.06	1.00			
SngPar	0.24	0.56	-0.24	-0.07	0.21	0.32	0.47	-0.26	-0.28	0.43	-0.41	-0.04	1.00		
ToSale	-0.56	-0.43	0.91	-0.54	0.18	-0.39	-0.03	-0.19	0.27	-0.30	-0.06	0.20	-0.18	1.00	
TobPrg	-0.13	0.11	0.17	0.09	0.47	-0.08	-0.17	0.65	0.05	-0.06	-0.33	0.12	-0.02	0.15	1.00

Educational Status (5 variables)

	NoHSDipl	9Dropout	EDropout	FreeRedc	SDropout
NoHSDipl	1.00				
9Dropout	0.42	1.00			
EDropout	0.34	0.62	1.00		
FreeRedc	0.44	0.50	0.52	1.00	
SDropout	0.42	0.70	0.66	0.42	1.00

Adult Legal Conflict (5 variables)

	Alcohol	Property	Violent	Drug	Drunken
Alcohol	1.00				
Property	0.76	1.00			
Violent	0.64	0.62	1.00		
Drug	0.70	0.53	0.57	1.00	
Drunken	0.93	0.64	0.71	0.73	1.00

Youth Legal Conflict (8 variables)

	1014Alchl	JuvAlchl	Curfew	Property	Violent	Drug	1014Prop	Vandal
1014Alchl	1.00							
JuvAlchl	0.98	1.00						
Curfew	0.02	0.02	1.00					
Property	0.23	0.18	0.68	1.00				
Violent	0.04	-0.01	0.47	0.61	1.00			
Drug	0.21	0.24	0.37	0.43	0.77	1.00		
1014Prop	0.18	0.15	0.70	0.98	0.51	0.37	1.00	
Vandal	0.22	0.19	0.72	0.84	0.47	0.44	0.87	1.00

Positive Environmental Aspects (5 variables)

	FostCare	Migratn	NewHome	PopVote	Employmt
FostCare	1.00				
Migratn	0.32	1.00			
NewHome	0.49	0.44	1.00		
PopVote	0.56	0.33	0.33	1.00	
Employmt	0.50	0.19	0.42	0.47	1.00

Modeling Criteria/Assumptions

Several criteria were established prior to the beginning of modeling. The retention of individual variables in a grouped variable set and the retention of the overall variable set model itself. Individual variables with either negative factor loadings or loadings of less than 0.20 were to be excluded from a variable set, with modeling to be resumed using the reduced variable set. The p-value level was set at p >/= .05 for model retention purposes. The second model retention criterion – that the model's root mean square error of approximation (RMSEA) must reach a level no higher than 0.10 – was also employed. This second model retention criterion provided a criterion that was sample-size independent. Finally, variable set correlation matrices were assumed to be based on 200 observations: Larger numbers of observations are likely to make modeling oversensitive to minor deviations between estimated and observed correlation matrices, while smaller numbers of observations are likely to inflate the statistical significance of estimated model parameters.

Model Confirmation/Validation using the 1999 Social Indicator Data Set

After the above modeling of the grouped variable constructs was completed using the 1997 data set, the five obtained variable group model structures were then tested using correlation matrices derived from the 1999 social indicator data set. In line with modeling criteria stated above,

individual variables from the 1999 data set with either negative factor loadings or loadings of less than 0.20 were excluded, with modeling then resumed using the reduced variable set. The corresponding 1997 model was then also adjusted so that any variable showing relational instability was removed.

Results

The following five variable set models were obtained through the conceptual and mathematical modeling processes described above using the 1997 data set; these models were then retained, after the 1999 modeling, with only one minor adjustment with the final exclusion of the "Homicides" variable from the **Negative Environmental Aspects** model.

1) Negative Environmental Aspects (4 retained variables common to 1997 and 1999; 6 retained variables for 1999 data set)

- Adolescent Suicides
- Children Living Away from Home
- Food Stamps*
- Mothers Who Used Alcohol During Pregnancy
- Single Parent Households
- TANF*

* Available only in the 1999 data set

1997 Data Set: Correlation Matrix Analyzed

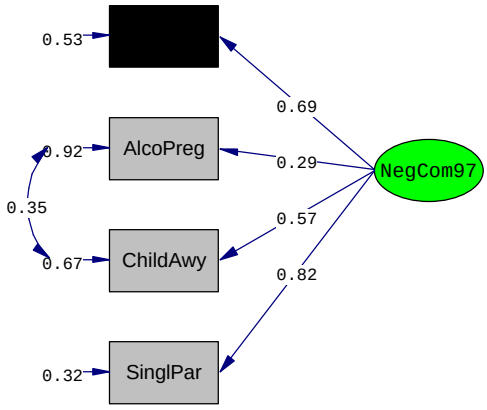
	AdolSuic	AlcoPreg	ChildAwy	SinglPar
AdolSuic	1.00			
AlcoPreg	0.26	1.00		
ChildAwy	0.39	0.51	1.00	
SinglPar	0.56	0.21	0.47	1.00

1999 Data Set: Correlation Matrix Analyzed

	AdolSuic	AlcoPreg	ChildAwy	SinglPar
AdolSuic	1.00			
AlcoPreg	0.67	1.00		
ChildAwy	0.61	0.71	1.00	
SinglPar	0.31	0.24	0.47	1.00

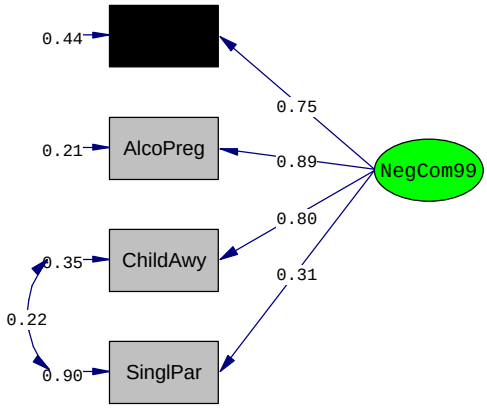
1999 Data Set: Correlation Matrix Analyzed (including the two new variables, "Food Stamps" and "TANF" available only in the 1999 data set)

	AdolSuic	AlcoPreg	ChildAwy	SinglPar	FoodStmp	TANF
AdolSuic	1.00					
AlcoPreg	0.67	1.00				
ChildAwy	0.61	0.71	1.00			
SinglPar	0.31	0.24	0.47	1.00		
FoodStmp	0.53	0.69	0.84	0.29	1.00	
TANF	0.56	0.77	0.85	0.36	0.98	1.00



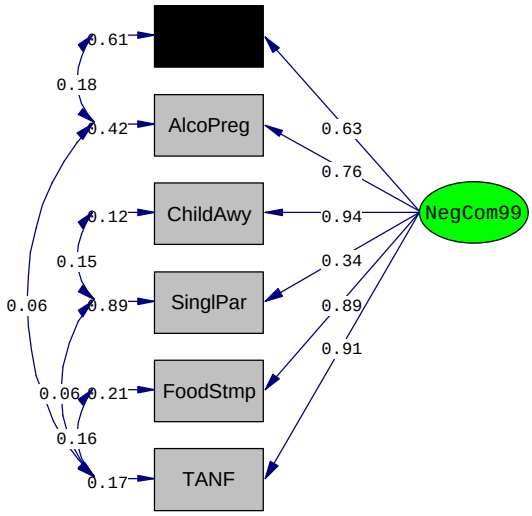
Chi-Square=2.87, df=1, P-value=0.08999, RMSEA=0.097

Negative Environmental Aspects
1997 Data Set



Chi-Square=4.17, df=1, P-value=0.04122, RMSEA=0.126

Negative Environmental Aspects
1999 Data Set



Chi-Square=6.56, df=4, P-value=0.16095, RMSEA=0.057

Negative Environmental Aspects
1999 Data Set (including two new variables, "Food Stamps" and "TANF", available only in the 1999 data set)

2) Educational Status (5 retained variables)

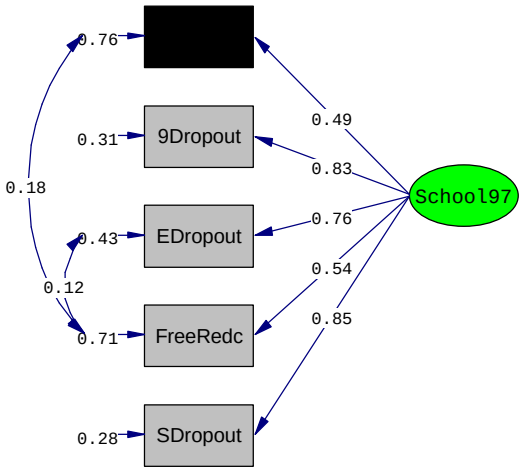
- Adults without a HS Diploma
- Dropouts Prior to 9th Grade
- Event Dropouts
- Free and Reduced Lunch Program Participants
- Status Dropouts

1997 Data Set: Correlation Matrix Analyzed

	NoHSDipl	9Dropout	EDropout	FreeRedc	SDropout
NoHSDipl	1.00				
9Dropout	0.42	1.00			
EDropout	0.34	0.62	1.00		
FreeRedc	0.44	0.50	0.52	1.00	
SDropout	0.42	0.70	0.66	0.42	1.00

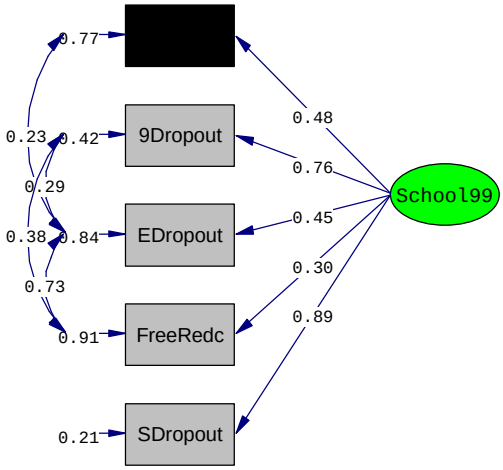
1999 Data Set: Correlation Matrix Analyzed

	NoHSDipl	9Dropout	EDropout	FreeRedc	SDropout
NoHSDipl	1.00				
9Dropout	0.34	1.00			
EDropout	0.37	0.63	1.00		
FreeRedc	0.05	0.61	0.83	1.00	
SDropout	0.42	0.68	0.41	0.28	1.00



Chi-Square=6.23, df=3, P-value=0.10086, RMSEA=0.074

Educational Status
1997 Data Set



Chi-Square=2.92, df=1, P-value=0.08758, RMSEA=0.098

Educational Status
1999 Data Set

3) Adult Legal Conflict (5 retained variables)

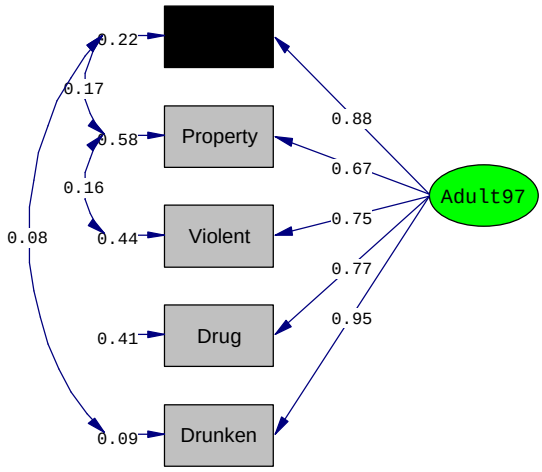
- Adult Arrests: Alcohol-Related
- Adult Arrests: Drug-Related
- Adult Arrests: Drunken Driving
- Adult Arrests: Property Crime
- Adult Arrests: Violent Crime

1997 Data Set: Correlation Matrix Analyzed

	Alcohol	Property	Violent	Drug	Drunken
Alcohol	1.00				
Property	0.76	1.00			
Violent	0.64	0.62	1.00		
Drug	0.70	0.53	0.57	1.00	
Drunken	0.93	0.64	0.71	0.73	1.00

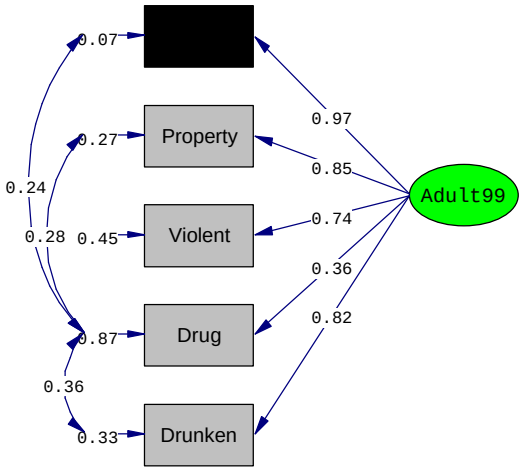
1999 Data Set: Correlation Matrix Analyzed

	Alcohol	Property	Violent	Drug	Drunken
Alcohol	1.00				
Property	0.82	1.00			
Violent	0.71	0.66	1.00		
Drug	0.59	0.57	0.27	1.00	
Drunken	0.79	0.68	0.59	0.65	1.00



Chi-Square=3.28, df=2, P-value=0.19440, RMSEA=0.057

Adult Legal Conflict
1997 Data Set



Chi-Square=2.28, df=2, P-value=0.32015, RMSEA=0.026

Adult Legal Conflict
1999 Data Set

4) Youth Legal Conflict (5 retained variables)

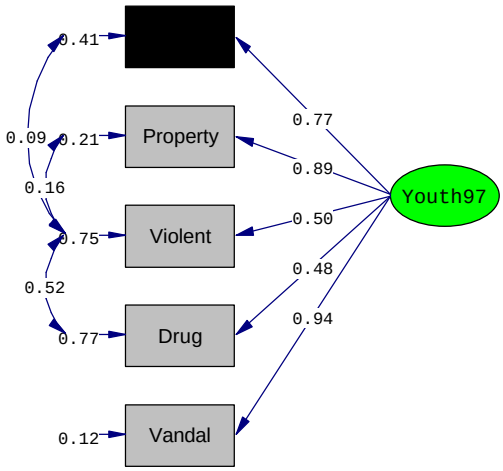
- Age 10-14 Arrests: Vandalism
- Juvenile Arrests: Curfew, Vandalism
- Juvenile Arrests: Drug-Related
- Juvenile Arrests: Property
- Juvenile Arrests: Violent Crime

1997 Data Set: Correlation Matrix Analyzed

	Curfew	Property	Violent	Drug	Vandal
Curfew	1.00				
Property	0.68	1.00			
Violent	0.47	0.61	1.00		
Drug	0.37	0.43	0.77	1.00	
Vandal	0.72	0.84	0.47	0.44	1.00

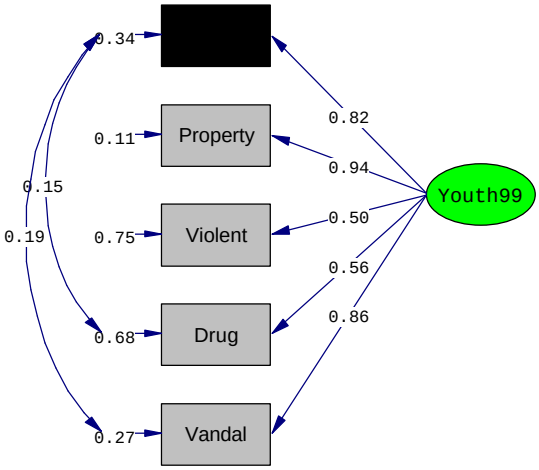
1999 Data Set: Correlation Matrix Analyzed

	Curfew	Property	Violent	Drug	Vandal
Curfew	1.00				
Property	0.77	1.00			
Violent	0.44	0.47	1.00		
Drug	0.61	0.53	0.34	1.00	
Vandal	0.89	0.81	0.42	0.48	1.00



Chi-Square=0.12, df=2, P-value=0.94320, RMSEA=0.000

Youth Legal Conflict
1997 Data Set



Chi-Square=3.31, df=3, P-value=0.34575, RMSEA=0.023

Youth Legal Conflict
1999 Data Set

5) Positive Environmental Aspects (5 retained variables)

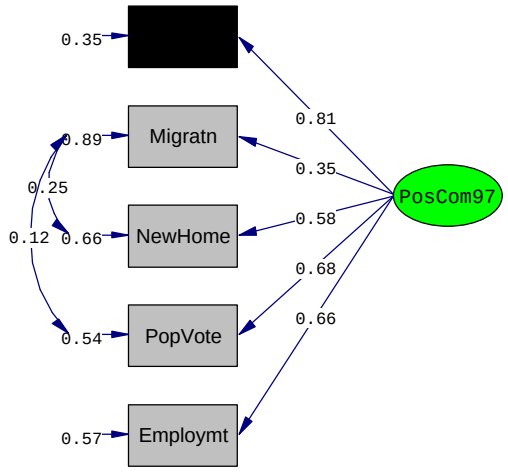
- Employment
- Foster Care
- Net Migration
- New Home Construction
- Population Voting in Elections

1997 Data Set: Correlation Matrix Analyzed

	FostCare	Migratn	NewHome	PopVote	Employmt
FostCare	1.00				
Migratn	0.32	1.00			
NewHome	0.49	0.44	1.00		
PopVote	0.56	0.33	0.33	1.00	
Employmt	0.50	0.19	0.42	0.47	1.00

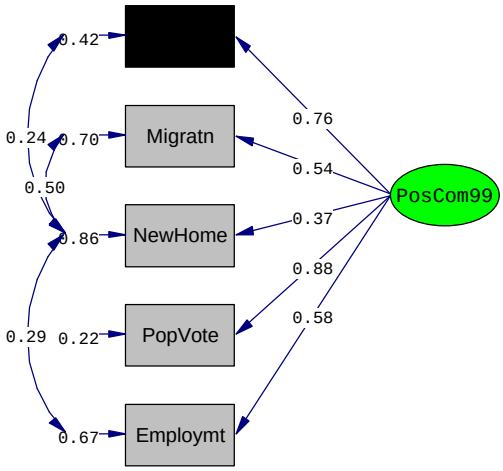
1999 Data Set: Correlation Matrix Analyzed

	FostCare	Migratn	NewHome	PopVote	Employmt
FostCare	1.00				
Migratn	0.44	1.00			
NewHome	0.54	0.71	1.00		
PopVote	0.67	0.47	0.33	1.00	
Employmt	0.43	0.28	0.48	0.52	1.00



Chi-Square=6.54, df=3, P-value=0.08823, RMSEA=0.077

Positive Environmental Aspects
1997 Data Set



Chi-Square=1.37, df=2, P-value=0.50346, RMSEA=0.000

Positive Environmental Aspects
1999 Data Set

Recommendations

While the social indicator indices presented in this report have been labeled, they must be considered as only preliminary in nature. Numerous data set limitations exist as to whether:

- all pertinent variables have indeed been collected;
- collected variables have been measured with sufficient precision to enable sound modeling to occur;
- collected variables have been measured on a requisite level (be it county, city/town, or zip code area) to allow for sufficient modeling precision.

The following recommendations are made regarding future index modeling:

- Use data representing a longer data collection period; for example, a five-year collection period rather than single year collection periods.
- Conduct the remodeling using updated 2000 census variables.
- Consider excluding either “Food Stamps” or “TANF” from future iterations of the **Negative Environmental Aspects** model, due to high variable inter-correlation (correlation = 0.98 in the 1999 data set), although both variables were of sufficient loading in the model tested.

- Focus on the collection of variables that are readily obtainable, that can be obtained with a determinable level of precision, and that have identical (or highly similar) variable counterparts in other states.

- Attempt to develop additional social indicator variables that capture more of the information available from **Negative Environmental Aspects** variables rejected during the present modeling.

- Experiment with alternative index constructs that might provide equally useful variable set interpretations.

Guide to Social Indicator Indices Interpretation

Preliminary social indicator indices consist of conceptually and mathematically related variables that have been consolidated and summarized into single index values. These indices thus simplify variable value interpretation as well as enable a clearer and more supportable interpretation of the risk or protective characteristics associated with increased values of identified index variables. Improved variable interpretation will enhance the ability of reviewers to more soundly determine a county's particular health status, in terms of county concerns, county successes, and areas in which a county appears to be undergoing change.

Using the actual social indicator indices values based on the 1999 data set and herein reported for Apache County, the following five index interpretations have been provided as examples of standard SIS indices interpretation.

1) Apache County average z-score for the **Negative Environmental Aspects** variables: **1.97**
   Interpretation: Apache County has, on average, a risk value for **Negative Environmental Aspects** that is 1.97 standard deviations above the all-counties average risk value (i.e., it has a greater risk here than do other counties).

2) Apache County average z-score for the **Educational Status** variables: **0.77**
   Interpretation: Apache County has, on average, a risk value for **Educational Status** that is 0.77 standard deviations above the all-counties average risk value (i.e., it has a greater risk here than do other counties).

3) Apache County average z-score for the **Adult Legal Conflict** variables: **-1.40**
   Interpretation: Apache County has, on average, a risk value for **Adult Legal Conflict** that is 1.40 standard deviations below the all-counties average risk value (i.e., it has a lesser risk here than do other counties).

4) Apache County average z-score for the **Youth Legal Conflict** variables: **-1.45**
   Interpretation: Apache County has, on average, a risk value for **Youth Legal Conflict** that is 1.45 standard deviations below the all-counties average risk value (i.e., it has a lesser risk here than do other counties).

5) Apache County average z-score for the **Positive Environmental Aspects** variables: **-1.27**
   Interpretation: Apache County has, on average, a protective value for **Positive Environmental Aspects** that is 1.27 standard deviations below the all-counties average protective value (i.e., it has a lesser protective value here than do other counties).